

PATENT COOPERATION TREATY

REC'D 03 OCT 2005

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INTERNATIONAL SEARCHING AUTHORITY

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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2004/016585

International filing date (day/month/year)
26.05.2004

Priority date (day/month/year)
16.06.2003

International Patent Classification (IPC) or both national classification and IPC
G06F9/445, H03M7/30

Applicant
INTEL CORPORATION

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/016585

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/016585

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-30
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-30
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1 Reference is made to the following document:

D1: US-A-5 999 989 (COMPAQ COMPUTER CORP) 7 December 1999

2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of **claims 1-30** does not involve an inventive step in the sense of Article 33(3) PCT.

2.1 In particular, the subject-matter of independent **claim 1** does not involve an inventive step in the sense of Article 33(3) PCT. Document D1 discloses (the references in parentheses applying to this document), compared with claim 1:

A method, comprising: compressing firmware variable data [via firmware] to produce compressed firmware variable data; and

("In a system comprising [...] a BIOS within a nonvolatile memory, a method comprising the steps of: defining a packed structure in the memory, each entry in the packed structure including a reduced number of bits sufficient to encode a configuration number that corresponds to a device's configuration state"; see claim 12)

storing the compressed firmware variable data in a firmware storage device.

("the steps of encoding and storing the configuration of at least one device in the system"; see claim 14, wherein the "firmware storage device" is the "nonvolatile memory" of claim 12, on which claim 14 depends)

The subject-matter of claim 1 differs from what is disclosed in document D1 in the following feature:

- *[compressing firmware variable data] via firmware*

However, this feature merely represents a choice between obvious alternatives, which the skilled person would effortlessly consider, namely an application, here the BIOS, being responsible and being used for appropriately storing its

configuration data, and therefore does not involve an inventive step.

2.2 The independent method **claims 9, 12 and 15** essentially comprise the subject-matter of independent method claim 1. For those features the same reasoning applies as set forth under point 2.1 above. The subject-matter of said claims does not involve an inventive step in the sense of Article 33(3) PCT for the following additional reasons:

2.3 The additional features of independent method **claim 9**,

- *receiving a request*
- *determining if a compressor is available*
- *employing the compressor if it is available*
- *not using the compressor if it is not available*

represent obvious, well-known measures commonly used on a daily basis in the art of computing and therefore do not involve an inventive step.

2.4 Likewise, the additional features of independent method **claim 12**,

- *in response to a power-on or reset event*
- *scanning for uncompressed variables*
- *converting to a compressed form*

also represent obvious, well-known measures commonly used in the art of computing and therefore do not involve an inventive step.

2.5 Similarly, the additional feature of independent method **claim 15**,

- *storing a first converter in a non-fault tolerant portion of a firmware storage device*

wherein the remaining features (using a converter if available) are already known from claim 9 (see point 2.3 above), merely represents a choice between obvious alternatives and therefore does not involve an inventive step.

2.6 The subject-matter of the independent "article of manufacture" **claims 18 and 22** and of the independent system **claim 27** substantially corresponds to that of the independent method claims 1, 9, 12 and 15. For the same reasoning set forth above for the latter claims, the subject-matter of claims 18, 22 and 27 does not involve

an inventive step in the sense of Article 33(3) PCT.

- 2.7 Dependent **claims 2-8, 10, 11, 13, 14, 16, 17, 19-21, 23-26 and 28-30** define additional features which are common measures obvious to the person skilled in the art. As a consequence, the subject-matter of said claims does not involve an inventive step in the sense of Article 33(3) PCT.